

REMARKS

Applicants thank the Examiner for total consideration given the present application. Claims 1-8 were pending prior to the Office Action. Claim 5 has been amended merely to address informal issues and to correct multiple dependency and new claim 9 has been added through this reply. Therefore, claims 1-9 are pending. Claims 1, 6, 7, and 8 are independent. Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

35 U.S.C. § 103 REJECTION – KAWADA ET AL. IN VIEW OF HAGENBUCH

Claims 1-3 and 5-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over KAWADA et al. (USPN 3,656,043, hereinafter “KAWADA”) in view of HAGENBUCH (USPN 7,039,507 B2) (hereinafter “HAGENBUCH”). Applicants respectfully traverse.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142*. One requirement to establish *prima facie case* of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j)*. Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, KAWADA discloses an automated steering control of a ship or vessel by constant tracking of turning or course changes represented by angular velocity, rate time, and

deviation angle from a set course. Any deviation in vessel's heading causes steering to set angular velocity and rate time to return to the set course (col. 2, line 29 – col. 3, line 10). KAWADA's disclosure is directed to minimizing overshoot during automatic steering by differential variation of rate time while monitoring angular velocity to steer the vessel to a correct heading. In claim 1 of current application recites:

A control system for controlling a control quantity of a subject to be controlled, said control system comprising:
a control quantity acquisition section for sequentially acquiring instantaneous values of the control quantity;
a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section;
a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section;
a control parameter storage section for storing control parameters in correlation with each of the multiple behavior patterns;
a control parameter read-out section for sequentially reading out the control parameters stored in the control parameter storage section in correlation with the behavior pattern which each of the behaviors of the controlled subject matches as determined by the behavior pattern judgment section; and
a control section for controlling the controlled subject based on the control parameters sequentially read out by the control parameter read-out section.

And claim 7 recites:

A control system for controlling a control quantity of a subject to be controlled, said control system comprising:
a control quantity acquisition section for sequentially acquiring instantaneous values of the control quantity;
a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section;

a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section;

a control parameter acquisition section for sequentially acquiring control parameters corresponding to the behavior pattern which each of the behaviors of the controlled subject matches as determined by the behavior pattern judgment section; and

a control section for controlling the controlled subject based on the control parameters sequentially acquired by the control parameter read-out section.

However, nowhere does KAWADA mentions either implicitly or explicitly “a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section” as recited in claims 1 and 7. More specifically, KAWADA fails to teach or suggest a time duration of specific kinds of behaviors of the controlled subject based on the values of the control quantity.

In addition, KAWADA fails to teach or suggest “a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section” as recited in claims 1 and 7. Specifically, KAWADA fails to teach or suggest determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on

the values of the control quantity. Moreover, KAWADA fails to teach or suggest time duration of each of the behaviors sequentially determined by the time judgment section.

In addition, the Office Action attempts to combine KAWADA with HAGENBUCH's control parameter storage and read-out to supplement the deficiency in KAWADA. However, the control parameter storage and read-out limitation in HAGENBUCH monitors the status of the vehicle condition. Nowhere in HAGENBUCH discloses a control parameter storage section for storing control parameters in correlation with each of the multiple behavior patterns. HAGENBUCH merely discloses a vehicle diagnostic control to extend useful life of the vehicle by recording work pattern and workload of the vehicle. The sensor records the vehicle condition to correlate failure mode based on the sensor's recording of vehicle history (col. 2, line 6 – col. 3, line 8). Thus, HAGENBUCH's disclosure does not sufficiently supplement the missing limitation KAWADA.

Furthermore, HAGENBUCH's teaching is a non-analogous art where the control parameter storage is incapable of controlling a control quantity of a subject to be controlled. HAGENBUCH only deals with sensory data storage to determine vehicle status with no suggestion or teaching of controlling the vehicle. Therefore, KAWADA and HAGENBUCH alone or in combination fail to teach or suggest all claimed features in claims 1 and 7.

The Applicants respectfully submit that the Office Action is based upon a selective combination of features found in the KAWADA and HAGENBUCH, and that such selective combining is impermissible. As stated in *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132,

1143 (Fed. Cir. 1985), "When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself." It is respectfully submitted that the Office Action cites the KAWADA patent, and then utilizes the present application as a road map to selectively replace various features of the KAWADA reference.

Therefore, for at least these reasons, claims 1 and 6-8 are distinguishable from the combination of KAWADA and HAGENBUCH. Claims 2-5 depend from claim 1. Therefore, for at least the reasons stated with respect to claim 1, claims 2-5 are also distinguishable over the combination of KAWADA and HAGENBUCH.

Applicant respectfully requests that the rejection of claims 1-3 and 5-8, based on KAWADA and HAGENBUCH, be withdrawn.

35 U.S.C. § 103 REJECTION – KAWADA AND HAGENBUCH FURTHER IN VIEW OF HIROKAWA ET AL.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over KAWADA and HAGENBUCH further in view of KIROKAWA et al. (USPN 3,696,282) (hereinafter "KIROKAWA"). Applicants respectfully traverse.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142*. One requirement to establish *prima facie case* of obviousness

is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j)*. Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, along with combination of KAWADA and HAGENBUCH, the Office Action attempts to supplement timing judgment section in KIROKAWA to obviate claim 4. However, Claim 4 recites “time judgment section determines timing at which the control quantity acquired by the control quantity acquisition section take extrema as being a start timing and an end timing of the time duration of each of the behaviors based on the values of the control quantity acquired by the control quantity acquisition section.” Nowhere in KIROKAWA, KAWADA, nor HAGENBUCH suggests or teaches the above feature. KIROKAWA merely uses timing device as an alarm device to alert that a vessel’s heading has deviated from its set course by a predetermined value. Therefore, KIROKAWA, KAWADA, nor HAGENBUCH alone or in combination thereof suggests or teaches all features in claim 4 and applicants request that the rejection of claim 4, based on KAWADA, HAGENBUCH, and KIROKAWA be withdrawn.

NEW CLAIMS

Claim 9 has been added through this reply. All new claims are believed to be distinguishable over the cited references for being dependent on claim 4.

CONCLUSION

All rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Michael R. Cammarata (Reg. No. 34,491), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month, extension of time for filing a reply in connection with the present application, and the required fee is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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